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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/602,071 | 06/24/2003 | Takayoshi Togino | 12219/34 | 1243 |
| 7590 | 03/22/2005 | | EXAMINER | |
| Kenyon and Kenyon 1500 K Street N.W., Suite 700 Washington, DC 20005 | | | PHAN, JAMES | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2872 | |

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,071

Applicant(s)

TOGINO ET AL.

Examiner

James Phan

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/24/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of Group II including claims 15-23 in the reply filed on 1/10/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 6/24/03 has considered by the examiner.

Additional Prior Art Cited

Kobayashi '763 discloses an image display apparatus having a scanning optical system including a non-rotationally symmetric surface; and Kobayashi '773 discloses an image display apparatus including a reflecting surface having a diffusing action.

Claim Rejections - 35 USC § 112

Claims 15-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 15, line 18, "said second reflecting surface" lacks a proper antecedent basis and thus, the claim is indefinite; also, "a light beam" recited in claim 15, lines 13-14, 15 and 17-18, and claim 23, lines 3 and 5-6, is confusing; Should it be changed to -- the light beam--?

Claims 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: no optical interconnections between the eyepiece and the diffusing surface(s).

Claim 17 recites the limitation "said diffusing surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 19-23 are rejected in that they are dependent on the indefinite claim and thus inherit the deficiency above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 (note that "said second reflecting surface" discussed above has been interpreted as a "second reflecting surface" or the "at least one reflecting surface") and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan document #281583 in view of Kobayashi '763.

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The Japan document #281583 discloses a two dimensional optical scanner including a light source (11); a scanner unit (12) having a gimbal structure (Fig. 3) for scanning a light beam emitted from the light source on a surface to be scanned in a two-dimensional direction; and a scanning optical system comprising a decentered prism (10) having an entrance surface (3T), a first reflecting surface (2R), a second reflecting surface (3r), and an exit surface (4T) (see Figs. 1 and 4-8 and the accompanying text), wherein at least one of the surfaces is a non-rotationally symmetric surface defined by equation (a) (see page 5, paragraph 0068). The Japan document #281583 does not provide an eyepiece optical system having positive power near the surface to be scanned for forming an image display system. However, a two dimensional optical scanner combined with a positive eyepiece optical system positioned near a surface to be scanned for forming an image display system is known in the art. Kobayashi '763 discloses an image display system having the combination of a two dimensional optical scanner (1) and an eyepiece optical system (ocular 2b) having positive power positioned near the surface to be scanned (see Figs. 1-3). Thus, it would have been obvious to one skilled in the art to apply the teaching of Kobayashi in the Japan document #281583 by providing Japan document #281583 a positive eyepiece/ocular optical system near a surface to be scanned so as to form an image display system for displaying a two-dimensional image to an observer.

Allowable Subject Matter

Claims 16-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the cited references teaches or suggests an image display system having (1) a diffusing surface located near the surface to be scanned in combination with the remaining features recited in each of claims 16-18 and 22; and (2) the eyepiece optical system having Fresnel lens (claim 19), Fresnel reflecting mirror (claim 20), and Fresnel back-surface reflecting mirror (claim 21) in combination the remaining features recited in each of the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (571) 272-2317. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP
3/12/05



James Phan
Primary Examiner